







2015 ANNUAL REPORT

## Whole Village Development Model



SELF's Whole Village Development Model takes an integrated approach to community empowerment, using a diverse mix of solar energy solutions to improve the lives of people who don't have access to electricity. By working closely with communities and adhering to our operating principles of SELF Determination, SELF Help, and SELF Reliance, we seek to ensure benefits in education, health, water and agriculture, enterprise, and community:



EDUCATION: powering lights, computers, and wireless internet services



HEALTH: powering clinic lights, labs, diagnostic equipment, and

vaccine refrigerators.



WATER &

AGRICULTURE: powering water pumps for clean drinking water and year-round

crop irrigation.



ENTERPRISE: powering centers for small businesses and providing electricity

for machinery and equipment.



 $\mathsf{COMMUNITY}$ : electrifying homes, community centers, water wells, and

street lighting.

## LETTER FROM OUR

# **EXECUTIVE DIRECTOR**



Dear Friends,

While our staff is confident in our ability to address energy poverty through effective solar applications, it is encouraging to get third-party confirmation that we are making a meaningful difference in the world. That recognition came twice in 2015.

In June, SELF was honored in New York City by the UN Department of Economic and Social Affairs (UNDESA) as one of ten finalists in a field of 221 that participated in its "Powering The Future We Want" competition. Its purpose was to "advance the implementation of sustainable development by identifying innovative practices in energy." SELF's Solar Market Garden (SMG) program—combining solar-powered pumps with drip irrigation—was recognized as an innovative solar energy application.

In December, the United Nations Climate Change Secretariat brought SELF to the Paris Climate Summit to showcase the SMG project. Selected as a winner of the UN's prestigious "Momentum for Change Lighthouse Activities" competition in the category of "Women For Results," the project provided an example of how women are empowered through the SMGs to grow food year-round and support their families in

spite of a limited growing season.



An anonymous donor was so impressed by SELF's projects in Northern Benin that he provided funding to install a 12th SMG and a microenterprise center (MEC) for the villages of Lou and Danganzi to share. The MECs that SELF installed in Dunkassa and Bessassi in 2014 were populated with tenants in 2015 and are providing a vibrant, commercial and community center. We also installed three new drinking water stations that are generating enough revenue to be fully sustainable.

In Colombia, we completed a 12.5 kW solar-powered micro-grid to provide electricity to a health clinic, children's nutrition and recuperation facilities, and medical staff housing in Sabana Crespo.

Our 2015 work in Haiti culminated with the completion of two community power systems: A 13kW micro-grid for Fe-Yo-Bien in the Central Highlands serves a micro-enterprise center and small business stalls along the community's central street. A 140kW micro-grid provides

electricity to homes, businesses, and 250 newly installed street lights in Roche-à-Bateaux, les Côteaux and Port-à-Piment on Haiti's Southwest Coast. In addition, SELF technicians ensured that more than 170 solar refrigerators will provide effective, safe vaccines throughout the country. The curriculum for the National Solar Training Center, supported by the Government of Norway, was completed in English and will be translated into French in 2016.

I'm pleased to share this retrospective of our 2015 achievements. It is a testament to our donors' confidence in our work. On behalf of our staff and the people we serve, thank you.

Warm regards,

Robert A. Freling Executive Director

# BENIN

#### Solar Market Gardens

Solar power continues to transform the lives of many people in the poor, arid Kalalé District. Formerly an area desperate for high-nutrient food to stave off severe hunger and malnutrition during its dry season, it now boasts 11 bountiful Solar Market Gardens (SMGs). Combining solar-powered pumps with drip irrigation to sustain gardens yearround, SELF has incubated the concept in Benin for nine years with the intent to later replicate it in other Sub-Saharan countries. This year, 400 women farmers working the SMGs produced more than 5.5 tons of produce during each month of the dry season. They fed 3,400 family members and provided access to nutritious produce for more than 69,000 community members. The number of beneficiaries will further increase with the upcoming installation of a 12th SMG that will be shared by the women of Lou and Danganzi villages.



Issifatou Kissira, President of the women's farming cooperative, ADESCA, told SELF, "My life has changed dramatically since we started the SMG program, because I'm now earning an income, and I'm better able to help my husband. We are feeding our family, and we have extra income to educate our children and get them medical care." She added that less domestic stress and the ability to start a savings account and invest in livestock are added benefits. Kissira traveled to Paris in December to represent her fellow women farmers at the UN Climate Change Summit. Her trip was made possible by the fact that SELF had been selected as a winner of the prestigious "Momentum For Change Lighthouse Award" from the United Nations Framework Convention on Climate Change. The award, presented in Paris, recognized the SMGs' innovative contribution to address climate change and women's empowerment issues.

The SMGs produce popular, nutritious foods, like dossi, the dark leafy greens that the boy on the right is holding. (See photo below.)



# BENIN

#### Water Access Stations

In addition to providing water to the SMGs, solar-powered pumps brought clean drinking water to three additional water access stations in Kalalé-bringing the total installed by SELF to seven—with three more under development. Local people were able to pay for the installation cost of two of those stations and build reserve accounts to cover repairs and pump replacements with the revenue they earned from charging users a nominal fee for water from SELF's previously installed water access stations. SELF's local partner, ADESCA, is completing an agreement with the Government of the Commune to develop and manage additional solar powered water supply systems throughout the Commune.

## Micro-Enterprise Centers

The two 5.2 kW solar-powered Micro-Enterprise Centers (MECs), funded by the **OPEC Fund for International Development** (OFID), that were designed and constructed in Bessassi and Dunkassa in 2014, were filled with vendors in 2015. Each MEC has spaces for 10 businesses. Local people now have easy access to goods and services never before imagined, as well as a lighted community meeting place. Current businesses include cold drink vendors, barbers, tailors, videotheatres, an appliance shop and a veterinary business. Making enough money to pay for their space and electric power, the vendors are assuring the facilities' long-term sustainability. The same donor of the 12th SMG also funded a new MEC for Lou and Danganzi that is scheduled to open in late 2016.





Children no longer go hungry in Kalalé since the SMGs provide year-round produce. (See photo below.)



# COLOMBIA

## Sabana Crespo Micro-grid

In June, SELF, with the support of the US Agency For International Development (USAID), completed installation of a solar micro-grid in Sabana Crespo, a village in the Sierra Nevada mountains of Northern Colombia. The village's Arhuaco tribe previously resisted offers to install electricity, but they have come to believe that solar power complements their spiritual connection with nature and the need to protect it. They are using solar electricity to power their health clinic, children's nutrition and recuperation facilities, and medical staff housing.





Unlike other government programs which failed to consider the financial ability of recipient villages to fund periodic and costly battery replacements, SELF confronted the issue head-on at the earliest stages of the project. Villagers actively participated in the design phase by carefully defining their priorities for power and reducing battery size with energy efficiency strategies. Now, a solar-powered micro-grid system has been installed to meet the village priority needs. All strategies have led to a reduced dependence on batteries.

The children of Sabana Crespo are key beneficiaries of the micro-grid. It will enhance their access to healthcare and education. (See photo below.)



# HAITI

SELF believes that one of the most effective ways of fighting energy poverty is to install micro-grids in poor, rural communities—providing a central source of electricity to power the priority needs of a community. Haiti is a prime proving ground for the concept. Thanks to the funding of the Inter-American Development Bank (IDB), United Nations Environment Programme (UNEP), U.S. Agency for International Development (USAID), and the Government of Norway, SELF played a significant role in bringing two micro-grid projects to Haiti.

### CEAC Micro-grid

Working in partnership with the National Rural Electrical Cooperative Association (NRECA), SELF completed construction during the summer of a 140 kW solar and generator-powered micro-grid to serve the communities of Port à Piment, Coteaux and Roche à Bateau on Haiti's Southwest Coast. Customers signed up for pre-paid metering systems for their homes and businesses through the member-owned Cooperative Eléctrique de l'Arrondissement des Côteaux (CEAC) which will operate and manage the power system. The target number of planned electrical meters was 1,600, and by the end of the year, nearly 650 were put into operation. They are used by a mix of residences, businesses, and institutions.

## Fe-Yo-Bien Micro-grid

The 13kW micro-grid for Fe-Yo-Bien in the Central Highlands has been completed and is powering a micro-enterprise center that houses 10 businesses as well as 50-70 homes and stores along the community's central street. The system is funded by IDB and the Kellogg Foundation.

#### Solar Market Garden

SELF, with the support of the Kellogg Foundation, completed a one-hectare SMG with Zanmi Agrikol (ZA) - Partners In Health's agriculture affiliate in Haiti—at the school's Corporant campus. The SMG will be a teaching tool for ZA's horticultural students and a means of income for the students who will sell some of the garden produce to help pay their school tuition. It is also intended that graduates of ZA's Horticultural program will go on to spread knowledge of solar water pumping and drip irrigation and to perhaps start their own SMGs. This SMG is unique, because it is the first of its kind to pump water directly from a river, rather than a well.

In order for the UN's goal of affordable and clean energy for all to be met by 2030, microgrids, like this one in Haiti, need to be installed in poor, rural communities around the world. (See photo below.)



# HAITI

### Solar Cooker Project

SELF entered into a partnership with Solar Household Energy (SHE) to introduce 25 of One Earth Designs' SolSource parabolic cookers in Tilori, Haiti. Among the project's objectives are to: disseminate, promote and encourage long-term adoption of the parabolic solar cooker, empower women and generate economic self-sufficiency, and help reduce the levels of deforestation, land erosion, and household air pollution. So far, those objectives are being met. The selected recipients of these cookers come from low-income households. especially single mothers and other vulnerable individuals.

Prestilia Prestanor, a 40-year-old single mother of eight, describes how the solar cooker has changed her family's life. "Before the solar cooker, I'd give my kids coffee and bread before they went to school. Now, I make them yucca and eggs. After school, I make them rice and beans with legumes or meat." Prestilia says that since the traditional wood stove is getting less use, her weekly, five-hour trips with her children into the forest to collect wood have shortened. She adds that an advantage of not using the wood stove is that it reduces danger. "It makes a lot of smoke, and my seven-year-old daughter once got burned on it."

Ongoing monitoring and evaluation of the project will continue through the fall of 2016.

### National Solar Training Center

Progress continued on finalizing the curriculum for the National Solar Training Center (NSTC), a two- and threeyear degree program for those with prior electrical knowledge who seek employment in designing, installing and maintaining PV systems. Funded by the Government of Norway, the NSTC is intended to be Haiti's premier photovoltaic (PV) training facility. It will contain fully equipped labs for practical experience in installing all types of PV systems and will also offer short-term courses and develop spin-off courses for other vocational schools in the country.



## Optimizing the Vaccine Cold Chain with Solar-Powered Refrigeration

SELF sent a refrigeration expert to provide training to our technicians and representatives from the Haitian Ministry of Health on the repair and maintenance of 153 solar vaccine refrigerators that were installed incorrectly in postearthquake Haiti by organizations other than SELF. The refrigerators all malfunctioned. Those who received training will be repairing the refrigerators through 2016.

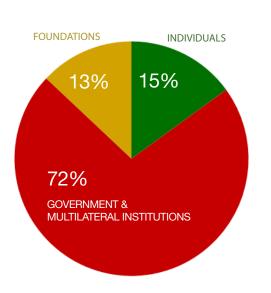
SELF received 28 Dometic solar vaccine refrigerators/water pack freezers-funded by the Centers for Disease Control (CDC) for health facilities throughout the country. By the end of the year, five units were installed.

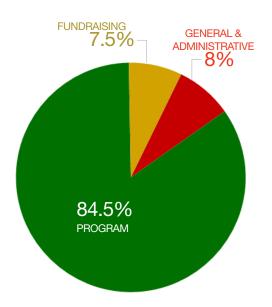
Of great note is that SELF assisted Haiti in applying for the GAVI Cold Chain Equipment Optimization Platform—a long-term strategy to bring vaccine refrigeration to 54 eligible countries. Haiti was chosen for the first round of installations that will be the pilot for the GAVI program.

# FINANCIAL HIGHLIGHTS

SELF Revenue in FY15







In 2015, SELF continued implementing large-scale projects funded by government and multi-lateral institutions, including the installation of two micro-grids in Haiti. These fee-for-service projects continued to be the dominant source of support. An award from PATH to develop energy harvesting technology increased foundation revenue for the year. Total revenue increased from 2014 to 2015, and given existing and anticipated new contracts, we expect that trend to continue into the next year. Fundraising expenses returned to prior-year level as departed staff were replaced.

The financial results depicted on the next page are derived from the SELF audited December 31, 2015 consolidated financial statements, which received an unqualified opinion. SELF's complete, audited financial statements can be found on our website www.self.org.

# FINANCIAL HIGHLIGHTS

#### STATEMENT OF ACTIVITIES

### For the Period Ended December 31, 2015

(With Summarized Financial Information for the Year Ended December 31, 2014)

	UNRESTRICTED	TEMPORARILY RESTRICTED	2015 TOTAL	2014 TOTAL
REVENUE AND SUPPORT				
Contracts	\$ 1,429,319	\$ -	\$ 1,429,319	\$ 1,373,947
Grants and donations	837,839	551,356	1,389,195	1,239,224
In-kind revenue	90,012	-	90,012	183,698
Interest and other income	1,200	233	1,433	1,406
Net assets released from restriction	ns:			
Satisfaction of program restricti	ons 621,164	\$ (621,164)	-	-
TOTAL REVENUE AND SUPPORT	2,979,534	(69,575)	2,909,959	2,798,947
EXPENSES				
Program Services	2,557,995	-	2,557,995	2,933,570
Management and general	227,946	-	227,946	251,079
Fundraising	247,013	-	247,013	159,345
TOTAL EXPENSES	3,032,954	-	3,032,954	3,343,994
CHANGE IN NET ASSETS	(53,420)	(69,575)	(122,995)	(545,719)
NET ASSETS, BEGINNING OF YEAR	242,352	824,989	1,067,341	1,613,060
NET ASSETS, END OF YEAR	\$ 188,932	\$ 755,414	\$ 944,346	\$ 1,067,341

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